

MARYLAND RIVERS STUDY EXECUTIVE SUMMARY



GB 1225 .M3 M27 1985 MDNR

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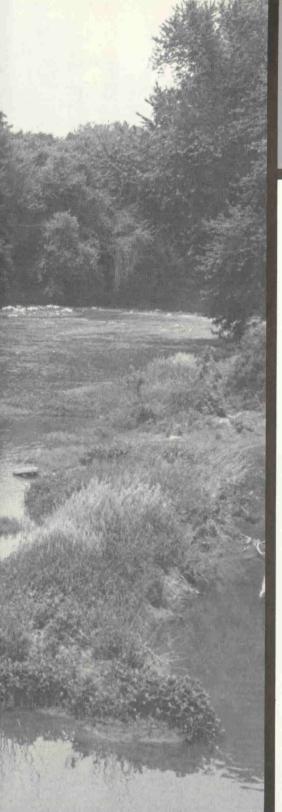
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MARYLAND RIVERS STUDY EXECUTIVE SUMMARY

WILD AND SCENIC RIVERS PROGRAM

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This booklet is a summary of the 154-page Maryland Rivers Study* published in 1984 as a cooperative project of the Maryland Department of Natural Resources' Wild and Scenic Rivers Program and the National Park Service's Natural Resources Planning Division. It is the second in a series of studies designed to be used by the Maryland Wild and Scenic Rivers Review Board when making recommendations to the General Assembly concerning designation of scenic and wild rivers in Maryland.

The first study, Scenic Rivers in Maryland, was prepared in 1970 by the Maryland Department of State Planning in cooperation with the Wild and Scenic

Rivers Review Board. Subsequently, in 1971, five rivers—the Patuxent, Pocomoke, Youghiogheny, Severn, and Wicomico (including Zekiah Swamp), were recommended and adopted as either wild and/or scenic, and became the initial components of the Maryland Wild and Scenic Rivers System. Added later were Deer Creek, the Monocacy and Anacostia Rivers, and those areas of the Potomac in Frederick and Montgomery Counties.

In evaluating and ranking the twentyfive rivers and creeks inventoried, the Maryland Rivers Study* identifies four rivers which have the most criteria necessary for inclusion in the Maryland Wild and Scenic Rivers System. They are the Chester, Choptank, Blackwater and the Nanticoke.

Designed for general distribution, this document summarizes all of the issues, recommendations and resource findings of the larger technical report and includes photographs of most of the rivers that were inventoried.

Isedora H. Ballard

 On file for examination at the Maryland Department of Natural Resources, Tawes State Office Building, 580 Taylor Avenue, Annapolis, MD 21401, and the National Park Service, Eastern Division, 143 South Third Street, Philadelphia, PA 19106.



INTRODUCTION

The Maryland Scenic and Wild Rivers Act as amended in 1978 called for the development of a wild and scenic rivers system to protect the water quality and assure the wise use of Maryland's river resources possessing outstanding scenic, fish, wildlife, and other recreation values of present and potential benefit to the citizens of the State. The legislation designates initial components of the State's wild and scenic rivers system and also states that in addition to the rivers already designated:

"... the Department shall inventory and study every other river and related shoreline in the State and identify rivers and their shorelines or portions of them eligible for inclusion into the system as either a scenic or wild river."*

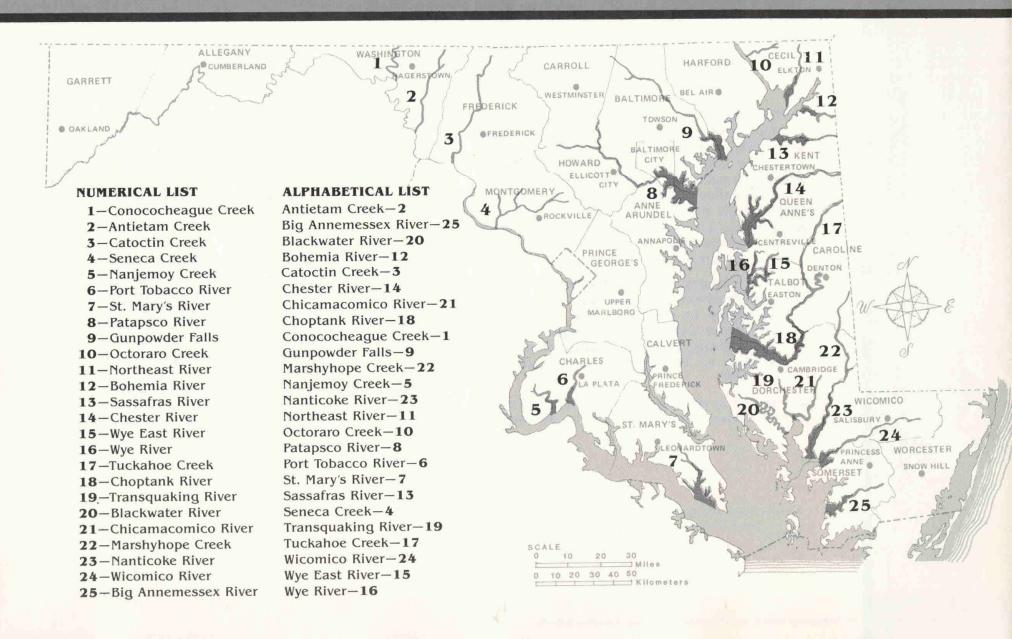
In response to this directive, the Maryland Department of Natural Resources, through its Wild and

Scenic Rivers Program, initiated the Maryland Rivers Study. At the request of the State, the U.S. Department of the Interior National Park Service's Mid-Atlantic Regional Office, as part of their ongoing river conservation technical assistance program to state and local governments, has provided staff to help conduct this study.

The purpose of this effort is to conduct a resource inventory and assess the natural, cultural, and recreational resource values of 25 Maryland rivers to determine which areas qualify for scenic or wild river designation under the provisions of the Maryland Scenic and Wild Rivers Act. This study has been accomplished by identifying, describing, and comparatively evaluating, important river-related resource values. This evaluation has led to a list of rivers which merit priority considerations by the State under the Maryland Scenic and Wild Rivers Act.

Maryland, Scenic and Wild Rivers Act (As Amended 1978)
 Article—Natural Resources, Section 8-402 e. Annotated code of Maryland

Locations of Study Rivers



THE MARYLAND RIVER STUDY METHOD

Why were the 25 inventoried rivers selected?

These 25 rivers and creeks were selected because they were recommended for future consideration by the State of Maryland in the 1970 inventory entitled, *Scenic Rivers in Maryland* by the Office of State Planning. In addition, consideration was given to these rivers because segments of these rivers were identified by the Mid-Atlantic Regional Office of the National Park Service as potential National Wild and Scenic Rivers in the Nationwide Rivers Inventory. The

Nationwide Rivers Inventory identifies rivers and streams that meet the criteria of the National Wild and Scenic Rivers Act (P.L. 90–542, as amended). Because these rivers possess outstanding values, it appeared that these rivers would be appropriate for the second phase of identifying candidates for possible future consideration under the Maryland Wild and Scenic Rivers Program.

How much of a river corridor was included in this study?

An area extending approximately ¼ mile from the shoreline on each side of a river was considered in this study; however, where a significant resource was identified adjacent to this area, it was included. In addition, significant resources of the tributaries of a study river were included. The description and

mileage on each river data sheet is for the mainstem only and the tributaries are listed by name, beginning with the one farthest from the mouth of the study river. Descriptions and mileages for the tributaries are available from the Maryland Department of Natural Resources.

What kind of information was being collected for each river?

The study identified and documented the presence of natural, recreational, and cultural resources determined to be of importance to Maryland residents. The features documented were those recognized to be of State and/or national significance. River maps and data sheets describing the features of each river have been prepared and are included in the *Maryland Rivers Study.**

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The Maryland Scenic and Wild Rivers Act noted that rivers and streams which fall into the following descriptions can be included in the Wild and Scenic Rivers System:

- 1 Trout streams and wetland areas the Department designates.
- 2 Spawning and propagation areas the Department outlines.
- 3 Streams and rivers with scenic and aesthetic value of statewide significance the Department outlines.
- 4 Existing or proposed public land adjacent to the rivers and streams in the State.
- 5 Sections of any river or stream where no development exists on either side of the river or stream for a distance of one-quarter mile from the mean high water line of the river or stream.
- 6 Sections of any river or stream where limited development exists but is compatible with the wise use of the resources.
- 7 Sections where encroachment is imminent and would lead to degradation of the river or stream, to some form of pollution, or adversely affect the intent of this subtitle.
- 8 Sections of any river or stream important as food production areas, areas supporting migratory waterfowl, and spawning areas for shellfish.

Based on the above descriptions and other information in the Scenic and Wild Rivers Act, the following river data categories were used for the purposes of this study. These data categories were used as the basis for evaluating the rivers.

NATURAL

CRITICAL/ECOLOGICAL AREAS
MIGRATORY WATERFOWL AREAS
SPAWNING/PROPAGATION AREAS
WETLANDS

RECREATIONAL

CANOEING
PUBLIC LANDS
SPORT FISHING AREAS

CULTURAL

ARCHAEOLOGICAL SITES
HISTORIC SITES
UNDEVELOPED LANDS

5

How was the information collected?

The information was collected from:

- Existing research information such as reports, studies, and other inventories
- River resource experts
- Preliminary draft review process

How were the rivers evaluated and assessed?

The objective of the study was to determine which rivers should receive priority attention under the Maryland Wild and Scenic Rivers Program. In order to achieve this objective, resources of importance to the Program were identified and evaluated. For each category, comparable information was collected for each river. The data was then reviewed and an evaluation system was developed to determine which rivers were most significant in each category. The criteria used varied depending on the type of data, but in general, an attempt was made to recognize the level

of significance (national or state) or the importance of the resource as it relates to the river and the state.

The next step involved combining data category information for all the study rivers to determine which rivers were most significant. All of the data categories were treated as equally significant. By identifying the number of high ratings given to each river, it became apparent that certain rivers had more outstanding resources than others. A matrix (page 8) summarizes the findings of the evaluation process.

What other information was considered?

A number of interviews with river users, government officials, and other interests within the study areas were conducted to identify various conservation and non-conservation issues in each river area. Questionnaires were developed and distributed to obtain information on river recreation values and to determine whether threats to river resources are perceived.

The issues that were identified for each river area are listed here with each river summary and range from those conditions which affect water quality—such as

agricultural runoff and failing septic systems, to those which affect recreational use of the rivers—such as boating congestion and problems associated with river access. The issues are important in that they reflect the concerns of river interests in the area. In some cases the issues should be given special consideration in deciding which rivers should receive attention under the Wild and Scenic Rivers Program and in future river planning efforts.

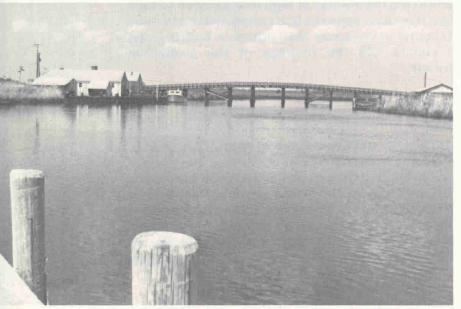
The Summary of Recommendations and Options on page 41 takes these issues into consideration.

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7 How will this study be used?

The report is intended for use by the Wild and Scenic Rivers Program staff in determining where efforts in river conservation should be focused, and it will also serve as a basis for making recommendations to the Wild and Scenic Rivers Review Board regarding rivers to be nominated for designation in the State rivers system.

The information gathered about the study rivers and related resource values in the *Maryland Rivers Study* are comprehensive in nature, and can also serve as a focus for identifying State priorities for the conservation of rivers in Maryland.



Transquaking River at Bestpitch, Fishing Bay W.M.A., Dorchester County.

Possible other uses of the study are to:

- Provide a focus for state efforts to effect federal/ state/local consistency for river related programs and planning.
- 2 Identify resource planning priorties for:
 - * State/regional/local river management planning
 - * Federal/state/local technical assistance
 - * Fiscal investment and allocation
 - * Facility development and land acquisition
- 3 Provide a framework for river conservation/development legislation.
- 4 Provide a framework for federal/state environmental impact review studies.
- 5 Provide a framework for river resource conflict avoidance/mitigation activities.
- 6 Provide a focus for private river conservation efforts.
- Provide input to and coordinate the application and consistency of a variety of existing state programs and regulations.

RIVER RESOURCE FINDINGS

The Maryland Rivers Study had identified over 250 miles of rivers and river segments on rivers which possess significant natural, recreational, and cultural resource values. These rivers are of statewide or greater than statewide significance.

Twenty-five Maryland rivers have been inventoried and analyzed to identify important river areas and to rank these areas according to their overall significance as unique and/or multiple value natural, recreational, and cultural river resources. The final ranking represents a synthesis of objective resource analysis. Rivers, river segments, and related tributaries identified as possessing significant river resource values were placed in one of three categories, identified as 1, 2, and 3. These categories represent a hierarchy of composite or cumulative river resource values, and are defined in the following manner:



CATEGORY #1 RIVERS

Rivers and related corridors which possess a composite resource value with greater than State significance.

CATEGORY #2 RIVERS

Rivers and related corridors which possess a composite resource value with statewide significance.

CATEGORY #3 RIVERS

Rivers and related corridors which possess a composite resource value with regional or local significance.

The total mileage of rivers and streams in each of the categories is summarized in the following table:

RIVER CATEGORY	# RIVERS	RIVER MILES	% TOTAL OF ALL MARYLAND RIVER MILES			
#1	4	175.2	5			
#2	3	83.2	2			
#3	18	331.8	9			
TOTALS	25	415.0	16%			

Photo above: The Chicamacomico River at Drawbridge Road Crossing, Dorchester County.

MARYLAND WILD AND SCENIC RIVER **Value Matrix**

NATURAL	REC	REATI	ONAL	CULTURAL			
CRITICAL/ ECOLOGICAL WATERFOWL SPAWNING / PROPOGATION	WETLANDS	PUBLIC LANDS	SPORT FISHING	ARCHEOLOGICAL	HISTORICAL	UNDEVELOPED	

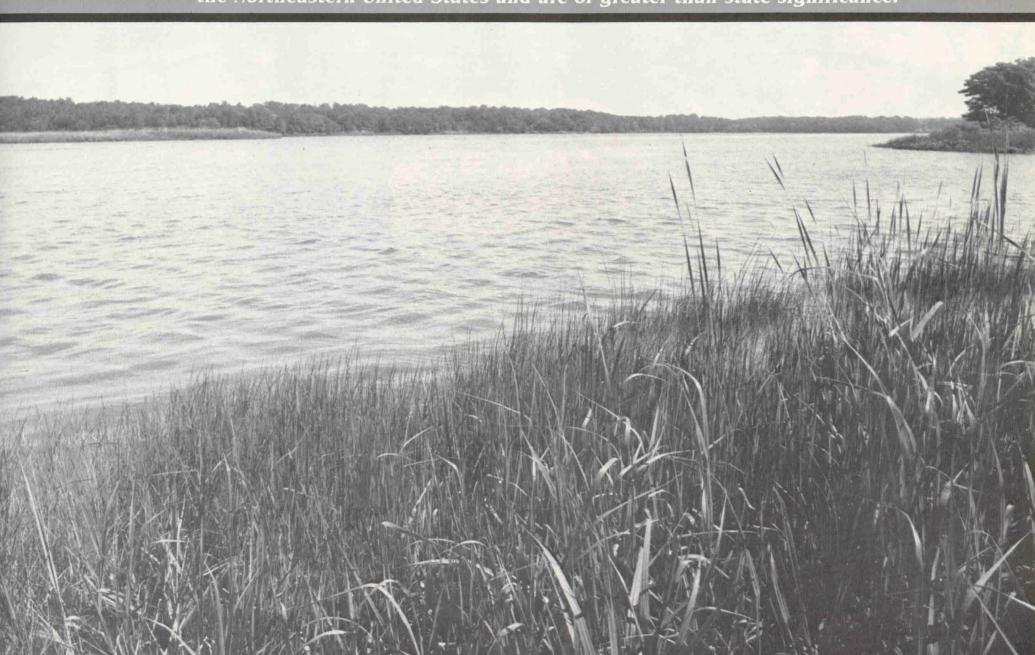
LEGEND

•	Highly Significant					
0	Significant					
0	Less Significant					
	No Area Reported					

RIVER/ CREEK	CR	W	RS G	WE	CA	P	SP	AR	SH	50
Antietam Creek	0	0	0	0	•	0	0	0	•	0
Big Annemessex River	/	•	•	•	0	0	0	0	0	•
Blackwater River	•	•		•	0		0	•	0	•
Bohemia River	0		•	0	0			0	0	0
Catoctin Creek	/	0	0	0	0	0	0	0	0	0
Chester River		•	•	•	0	0	0	0	•	•
Chicamacomico River	•	•	•	•	0		0	0	0	•
Choptank River	•	•	•	•	0	0	•		0	•
Conococheague Creek	0	0	0	0	•	0	0	0		0
Gunpowder Falls	0	0	0	0	•	•	•	0	0	0
Marshyhope Creek	•	0			0	0	0	•	0	0
Nanjemoy Creek	•	-	0	0	0	/	0	•	0	0
Nanticoke River	•	0	0		0	0				
Northeast River		0	0	0	0		0	0	0	0
Octoraro Creek	0		0	0	0	0	0	0	0	0
Patapsco River	0	0	0	0		•		•	•	0
Port Tobacco River	•	0	0		0	0	0	•	•	0
St. Mary's River	•	0	0	0	0	0	0			0
Sassafras River	•		0	0	0	0	0	0	0	0
Seneca Creek	•	0	0	0	0			0		0
Transquaking River	•	0	•	•	0	0	0	0	0	•
Tuckahoe Creek	•	•	0	0	0	0	0	0	0	•
Wicomico River	0				0	0	0	0	0	0
Wye East River		•	0	0	0	0	0	0	0	0
Wye River			0	0	0	0	0	0	0	0

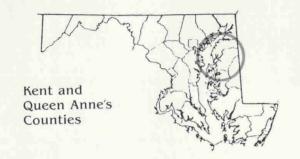
CATEGORY #1 RIVERS

The Chester River, Choptank River, Blackwater River, and Nanticoke River possess six or more highly significant natural, recreational, and cultural river-related resource values. These rivers have values which are unique in the Northeastern United States and are of greater than state significance.





The Chester River





RIVER DESCRIPTION

The Chester River forms a boundary between Kent and Queen Annes Counties as it flows from its headwaters in Delaware to the Bay. Towards the mouth the shore is a maze of deep inlets which is typical of coastal plain province eastern shore rivers. Above Chestertown, the river follows a placid course between low banks with moderately high ground behind. It is a pastoral scene with patches of green woods and occasional old houses on a point of vantage. Chestertown is second only to Annapolis in the number of beautiful eighteenth century dwellings that have survived.

RIVER RESOURCES

Seven active bald eagle nesting territories and several suitable locations for Delmarva fox squirrel habitat have been reported along the river corridor. Both of these species are classified as endangered by the U.S. Fish and Wildlife Service. The fact that this area has almost twice the number of migratory waterfowl of any other study river was reported in a waterfowl survey of the Chester River. In addition it is reported that this watershed is the most important wintering area for Canada geese in Maryland and the Atlantic flyway.

A large and diverse resident fin-

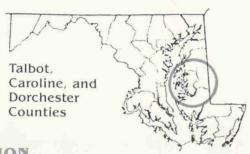
fish population of estuarine and fresh water populations and seasonal influxes of anadromous species reportedly makes the Chester River a major contributor to the aquatic resources of the Maryland Coastal Zone. As a result of this contribution to the aquatic resources of the Bay, the wetlands of the Chester River are considered to be highly significant.

The Chestertown Historic District has been designated a National Historic Landmark and seven sites along the corridor have been placed on the National Register of Historic Places.

- Potential non-point sources of pollution are failing septic systems, agricultural runoff, waterfowl, and urban runoff in the lower part of the segment. The Chestertown area is also a source of potential urban runoff.
- Present water pollution is affecting recreational use of the river, particularly fishing and oystering.
- Archaeological potential is high and sites need protection.
- Congestion from recreational use has resulted in Kent County issuing county parking and launching permits to alleviate crowded conditions.
- Approximately 97 miles of channel work for the purpose of flood prevention, agricultural water management (drainage), and watershed protection is in the planning stage.



The Choptank River



RIVER DESCRIPTION

Beginning in Kent County, Delaware, the Choptank is the longest of the Eastern Shore rivers and winds through swamp forests to tidewater at Greensboro. Maryland. An unusual number of holly trees grow along this river and because of the high elevation of some of the adjacent land, beech trees cover the hillsides. The shallow freshwater marshes along the Choptank River provide outstanding wildlife habitats. Crab, oyster, shad, perch, black duck, mallard, nesting Canada goose, canvasback, raccoon, opossum, fox and deer are some of the dominant species who inhabit the marshes.

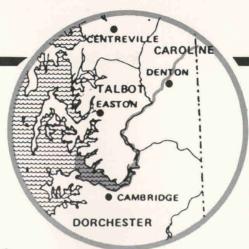
RIVER RESOURCES

Four active bald eagle nesting territories and several suitable locations for Delmarva fox squirrel habitat have been reported along the river corridor. Both of these species are classified as endangered by the U.S. Fish and Wildlife Service. The Choptank River's waterfowl survey area had the second largest number of waterfowl of any other study river and is reported to be one of the most important wintering areas for migratory waterfowl in Maryland. The Choptank River is Maryland's third largest spawning area for striped bass and is larger than any other study river's spawning area.

The Choptank River has coastal plain wetlands, which have been ranked as highly significant by the Maryland Water Resources Administration. Four key tidal sport fishing areas have been identified in this river corridor making it one of the most significant recreational fishing rivers in the state.

Seventy-two prehistoric sites have been identified by the Maryland Historic Trust along the river corridor. These sites include several rare and complex mortuary areas.

◆ View of the Choptank River at Denton from public landing, Caroline County.

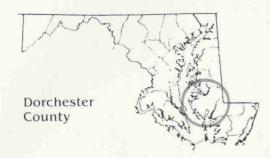


- Potential non-point sources of pollution are urban runoff, primarily in the vicinity of Cambridge, agricultural runoff, failing septic systems, waterfowl in the lower Choptank, and construction in the Upper Choptank.
- Point sources of pollution from municipal outflows from Cambridge, Secretary, Preston, and Denton can be a problem and cause the closure of oyster beds. However, local actions are underway to correct this problem.
- Shoreline erosion has also been identified as a problem. Portions of the river corridor are being developed at a rapid rate because of the suitability and desirability of many of the sites.

- Dorchester County has vast wetland areas regulated by state and federal laws, and local regulations for development and conservation areas. Additional state regulations reportedly would not be desirable in the county. Caroline County has a zoning ordinance which allows the designation of conservation areas, but no areas have been designated yet. Talbot County zoning provides some protection of shorelines through lot sizing and permitted uses. Talbot County has recently changed some of its zoning ordinance to set standards and regulate the location of boating facilities.
- Recreational access for boating and fishing is desirable in the lower portion of the river. Indications are that assistance in planning and managing recreational access would be helpful. In addition, the Choptank River Bridge is being considered for replacement and there is interest in using the old bridge as a fishing pier.



The Blackwater River





Flat, brackish-fresh water marshland, swamp forests, bottomland hardwoods, and fields occupy the land adjacent to this river. Part of the Coastal Plain Province on the Eastern Shore, this unique area has excellent ecological diversity with abundant wildlife. The forests have some loblolly pine, white oak, sweet and black gum that is over 100-175 years old. Areas adjacent to or near the Blackwater National Wildlife Refuge contain the highest concentration of nesting bald eagles in the eastern United States north of Florida. Being undisturbed and very scenic, along with the neighboring watermen's communities and agriculture, this area reflects a historic way of life of Maryland's eastern shore.

The largest number of bald eagle nesting territories in Maryland occur along this river corridor. This species is classified as endangered by the U.S. Fish and Wildlife Service. The striped bass spawning areas along the Blackwater are reported to be the largest in Maryland, occurring along a fourteen mile stretch up from the mouth of the river. The wetlands along the Blackwater, which have been ranked as highly significant by the Maryland Water Resources Administration, include an area which is almost twice that of any other study river.

Eighty percent of the river corridor is in public ownership which includes the 14,263 acre Blackwater National Wildlife

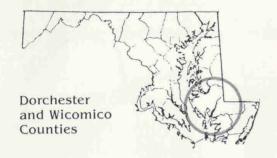
Refuge and a portion of the Maryland Fishing Bay Wildlife Management Area. The Blackwater River corridor is the longest and least developed of any of the study rivers. The earliest vessel yet recovered in Maryland, a canoe, was recorded within this corridor from the Luthy prehistoric site of the Woodland Period (1,000 B.C.-1,600 A.D.).

- The disappearance of marshland is occurring and the cause is unknown: studies are in progress now to determine what is happening.
- Potential non-point sources of pollution are agricultural runoff and silt from timbering operations.

- Conservation of this undeveloped river could ensure the preservation of as yet unlocated archaeological sites that have high potential for cultural resources.
- Thirty-two percent of Dorchester County's land is classified as wetlands and is recognized by federal and state preservation laws; the county has mixed feelings about additional state involvement in conservation.
- Most of the Blackwater River is protected by public ownership. Dorchester County has designated the balance of the land as a conservation zone which limits development. Soil characteristics and state wetland regulations also limit the river from further development. Additional conservation of the river corridor is not a priority in Dorchester County.



The Nanticoke River





RIVER DESCRIPTION

Flowing through the Embayed Coastal Section of the Atlantic Coastal Province, the Nanticoke gathers its waters from the swamps and cultivated flatlands of Sussex County, Delaware and then cuts across Maryland's lower Easter Shore. The predominate land use character of the river is agricultural and tidal wetlands. This charming area represents the least developed major river valley segment in the state and the longest unbroken pine forest on the peninsula lines the corridor.

RIVER RESOURCES

Three active bald eagle nesting territories and several suitable locations for Delmarva fox squirrel habitat have been reported along the river corridor. Both of these species of animals are classified as endangered by the U.S. Fish and Wildlife Service. The Nanticoke River is also an important wintering area for black ducks and canvasbacks. The river and its tributaries support nursery areas for a wide spectrum of resident freshwater fish. the anadromous and semianadromous species. The area between river mile six and twenty-six reported to be one of the most important areas in Maryland for the spawning and production of striped bass.

Significant Coastal Plain wetlands along the Nanticoke have been ranked highly significant by the Maryland Water Resources Administration. Four key tidal sport fishing areas have been reported in the Nanticoke River corridor making it one of the most significant recreational fishing rivers in Maryland.

Thirty-five prehistoric sites have been identified by the Maryland Historic Trust along the Nanticoke River corridor which include several of the Archaic Period (7,500 B.C.-1,000 A.D.). The Nanticoke River corridor is one of the longest and least developed of all the study rivers.

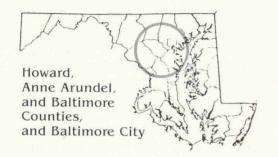
- Water quality conditions remain good with the exception of an area of the river closed to shellfish harvesting.
- Potential non-point sources of pollution are urban runoff, failing septic systems, and agricultural runoff.
- Continued use of the Nanticoke River as a commercial waterway is the primary interest of Dorchester and Wicomico Counties. In addition, there is local support for the expansion of an existing power plant in Vienna. Any state actions that would limit or preclude the above uses reported would not be acceptable to local officials.

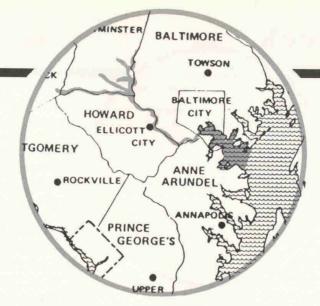
CATEGORY #2 RIVERS

The Patapsco River, Marshyhope Creek, and Chicamacomico River, possess five highly significant natural, recreational, and cultural river-related values. These rivers have values which are unique and of statewide significance.



Patapsco River





RIVER DESCRIPTION

Flowing through the Piedmont and Coastal Plain Provinces and the geographical heart of Maryland, the Patapsco joins the Chesapeake near Baltimore, the State's largest city and major industrial center. Liberty Reservoir is located on the North Branch and is used as a water supply for the Baltimore Metropolitan Area. Land use is primarily agriculture or forest in the western portion and becomes more urban in the eastern portion towards the Chesapeake Bay and the City of Baltimore where most of the residential and industrial activity is concentrated.

RIVER RESOURCES

Canoe experts have identified the five-mile segment from Hollofield to Ellicott City for its whitewater gradient (Difficulty rating 1–3) which offers unique canoeing opportunities close to the Metropolitan Baltimore area. Sixty percent of the river corridor is in public ownership and includes the 12,000-acre Patapsco Valley State Park. The Maryland Wildlife Administration has identified the Patapsco as a trout stream and the Tidewater Administration has designated the river a key tidal sport fishing area.

Thirty-three prehistoric sites have been recorded by the Maryland Historic Trust including several rock shelters and caves. Two National Historic Landmarks, Ellicott Station, the Thomas Viaduct, and Fort McHenry, a National Monument are within the river corridor. In addition, seven sites listed in the National Register of Historic Places are also along the Patapsco.

ISSUES

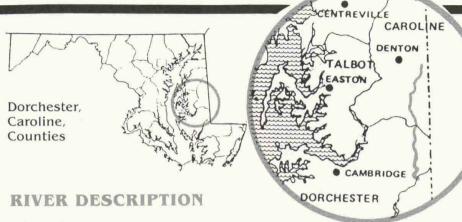
- As a result of the diversity of land use in this basin, water quality varies greatly. The more urban and industrial related waters have major water quality problems which include violations of dissolved oxygen and/or bacteria standards.
- Potential non-point sources of pollution on the mainstem are sanitary sewer overflows, failing septic systems, urban runoff, and construction activity.
- All of the area lying west of a line running from the west bank of the mouth of Shallow Creek to Budkin Point and southeast of a line running from North Point to Rock Point

are closed to shellfish harvesting due to high bacteria levels.

- No comprehensive resource management plan exists at the present time to support ongoing conservation work in the area. Much of the northern segment is in a conservation zone while the southern segment has extensive state ownership and plans.
- Local government efforts are focused on solving the water related problems of water supply, development, flood damage reduction through flood warning, and acquisition and conservation of open space and agricultural lands in this corridor.
- There are 5 existing dams on the river and a license application was submitted to FERC to use Union Dam for hydropower.

← View of the Patapsco River and Bloede Dam, Baltimore and Howard Counties.

Marshyhope Creek



Marshyhope Creek located in the Embayed Coastal Section of the Coastal Plain Province is the major tributary of the Nanticoke River. Its waters are suitable for water contact recreation and aquatic life uses. Marshyhope Creek has a narrow and winding route and flows through swampland. It travels out of Kent and Sussex Counties in Delaware and through Caroline and Dorchester Counties in Maryland to join the Nanticoke River. The upper river has been channelized. A few hundred yards downstream from Delaware Route 404 it begins flowing through swampland until below Federalsburg it becomes an estuarine creek.

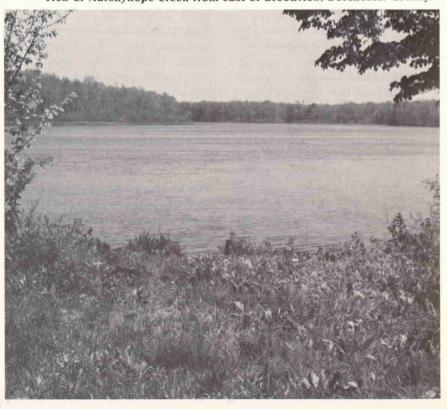
RIVER RESOURCES

Three active bald eagle nesting territories and several suitable locations for Delmarva fox squirrel habitat have been reported along the Marshyhope Creek corridor. Both animal species are classified as endangered by the U.S. Fish and Wildlife Service. Marshyhope Creek supports a large waterfowl population and is an important migration and wintering area for mallards, black ducks, and teal. Striped bass and shad spawn are in the lower two miles of the creek. The Marshyhope Creek has broad expanses of tidal wetlands which have been ranked as highly significant in Maryland by the Water Resources Administration. Of the thirty-five prehistoric sites recorded along the creek's corridor by the Maryland Historic Trust, several are of the Archaic Period (7,500 B.C.-1,000 A.D.).

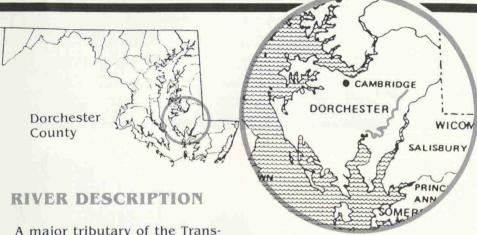
ISSUES

- Water conditions are generally good but occasionally exhibit low dissolved oxygen levels.
- sources of pollution are urban runoff, failing septic systems, and agricultural runoff.
- Thirty-two percent of Dorchester County's land is classified as wetlands and is recognized by federal and state preservation laws; the county • Potential non-point has mixed feelings about additional state conservation efforts.

View of Marshyhope Creek from east of Brookview, Dorchester County.



Chicamacomico River



A major tributary of the Transquaking River, the Chicamacmico meanders in a southwest direction through the Eastern Shore of the Coastal Plain Province. The extent of swamps, natural ponds, marshes and bogs provide habitats for a diversity of vegetation and wildlife. Route 50 separates agricultural lands which are used for chicken farms from the wetlands to the south. Less than 1% of the land is developed and wetlands occupy much of the remaining corridor, giving a very rural quality.

RIVER RESOURCES

Four active bald eagle nesting territories and several locations suitable for Delmarva fox squirrel habitat have been reported along the river corridor. Both of these animal species are classified as endangered by the U.S. Fish and Wildlife Service. The Chicamacomico River has a

large waterfowl population and is used as a migration and wintering area by mallards, black ducks, and Canada geese. Striped bass, one of Maryland's important finfish, spawn in the Chicamacomico.

ISSUES

• Potential non-point sources of pollution are agricultural runoff, failing septic systems, and wildlife concentrations.

• Conservation of this undeveloped river could insure the preservation of as yet unlocated archaeological sites that have high potential for cultural resources.

• Thirty-two percent of Dorchester County's land is classified as wetlands and is recognized by federal and state preservation laws; the county has mixed feelings about additional state involvement in conservation.

• Dorchester County has designated areas of the Chicamacomico as conservation zones which limits development. The county feels there is no pressing need for additional river conservation because there is very little development pressure. Soil characteristics and state wetland regulations also limit the river from further development.

The Chicamacomico River near Drawbridge Road, Dorchester County.



CATEGORY #3 RIVERS

The Conococheague Creek, Tuckahoe Creek, Wicomico River, Antietam Creek, Catoctin Creek, Seneca Creek, Nanjemoy Creek, Port Tobacco River, St. Mary's River, Gunpowder Falls, Octoraro Creek, Northeast River, Bohemia River, Sassafras River, Wye River, and Wye East River, Transquaking River, and Big Annemessex River possess important natural, cultural, and recreational river-related resource values. These rivers have one or more values which are unique and are of regional and/or local significance.



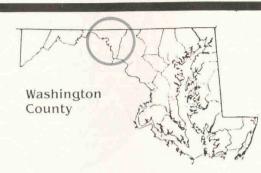
Conococheague Creek

RIVER DESCRIPTION

Located in the valley and ridge section of the Appalachian Province, the Conococheague Creek drains the Cumberland Valley. This valley is devoted to agriculture and is the northern extension of the Shenandoah Valley. The stream's major attractions are cultural, such as barns, farmhouses, covered and stonearch bridges, and the old and beautiful towns of Williamsport, Mercersburg, and Green Castle. Probably the most scenic river in the county it remains isolated and has scattered development along its corridor.

RIVER RESOURCES

Canoe experts have identified the segment from Chambers-burg to West Branch for its quality of whitewater and fast-moving riffles. Forty historic sites including two properties listed in the National Register of Historic Places have also been identified along the creek's corridor.





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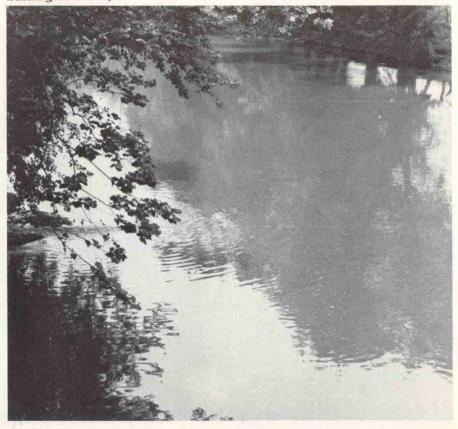
ISSUES

• Water quality standards are generally good but high levels of fecal coliform bacteria have been found.

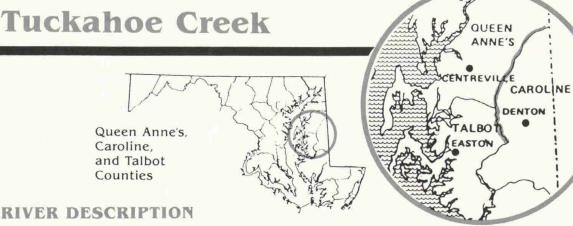
• Potential non-point sources of pollution are failing septic systems and agricultural and urban runoff.

• The Conococheague is the only major creek in Washington County that is without public access points or a park area, although it is considered to be a valuable recreational resource. Development of a natural features park and trail along the Conococheague to highlight its geologic and natural features has been recommended by the Washington County Recreation Plan.

Looking down at Conococheague Creek from the Williamsport Bridge, Washington County.



Tuckahoe Creek



Tuckahoe Creek, a tributary of the Choptank, runs through a major state park on the Eastern Shore, the Tuckahoe State Park.

Tuckahoe Creek twists through swamps and marshes forming a border between Caroline, Talbot and Queen Annes Counties.

Large flocks of waterfowl winter above the lake at Crouse Mill Road. Big beautiful trees grow in the surrounding forests which



View of Tuckahoe Creek from below dam at Tuckahoe State Park, Caroline County.

are deep and dense. The bottomland forest area is interspersed with fresh water marshes which are important areas for wildlife. Osprey are residents of the area and use it for feeding purposes. The surrounding land use is primarily agricultural.

RIVER RESOURCES

Four active bald eagle nesting territories and several suitable locations for Delmarva fox squirrel habitat have been reported along the Tuckahoe Creek corridor. Both of these animal species are classified as endangered by the U.S. Fish and Wildlife Service. Tuckahoe Creek has a large waterfowl population and is an important migration and wintering area for black ducks and mallards.

ISSUES

 Water quality is generally good but occasional violations of bacterial standards are recorded in the upper reaches of the segment; low dissolved oxygen values are often observed.

 Present zoning protects very few areas from development and no stream valley conservation program exists at the present time.

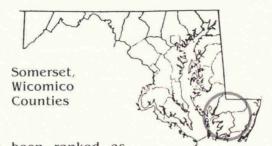
Wicomico River

RIVER DESCRIPTION

The Wicomico River flows through the Embayed Coastal Section of the Atlantic Coastal Province and is characterized by meanders which reflect a lack of gradient. Land adjacent to the meanders is almost without exception marsh or swamp along the inner side of the river's course. Ponds and forested areas occur throughout the river corridor and are a dominant natural feature. The Wicomico River bisects the longest urban industrial region on the Eastern Shore which includes Salisbury, Fruitland, and Delmar. The river is navigable and serves Salisbury which is second in Maryland to Baltimore City in value of goods shipped.

RIVER RESOURCES

Two active bald eagle nesting territories have been reported along the river corridor. The bald eagle is classified as endangered by the U.S. Fish and Wildlife Service. Salisbury Paleo channel has been identified by the State of Maryland as an Area of Critical Concern. The Wicomico has a large waterfowl population and is used largely by wintering Canada geese, black ducks, mallards, and canvasbacks. The Wicomico has tidal wetlands



which have been ranked as highly significant by the Maryland Water Resources Administration. Forty prehistoric sites have been recorded along the river corridor, several of which date to the Archaic Period (7,500 B.C.-1,000 A.D.).

ISSUES

• The Upper Wicomico above Johnson Pond and the

area near Salisbury experience violations of the Class I bacterial standards.

• The lower portion of the Wicomico has been closed to shellfish harvesting.

• Dredging of the Wicomico is proposed and locating spoil sites is a priority on this major waterway transportation route.

• Salisbury is a busy port that is undergoing rehabilitation of its downtown area which includes the development of waterfront parks. Interest in additional conservation efforts reportedly would be secondary to any improvement of this river for navigation purposes.

WICOMICO

WORCESTER

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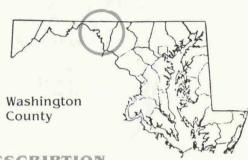
HIDGE

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Whitehaven Ferry Landing on the Somerset County shore of the Wicomico River.

Antietam Creek





RIVER DESCRIPTION

Located on the eastern edge of the valley and ridge section of the Appalachian Province, Antietam Creek drains the eastern edge of Maryland's Cumberland Valley. The creek winds and turns from where it forms at the confluence of the West and East branches just north of the Mason-Dixon Line to the Potomac River. Antietam Creek is a popular fishing and canoeing stream. The stream is stocked with trout in some sections and canoe access is good. Adjacent land use is primarily agricultural. Graceful stone arch bridges, old mills and farm houses provide scenery of historical interest.

RIVER RESOURCES

The Maryland Wildlife Administration has designated Little Antietam Creek from Dog Street Bridge to its mouth at Antietam Creek as a trout management area. Fifty-eight historic

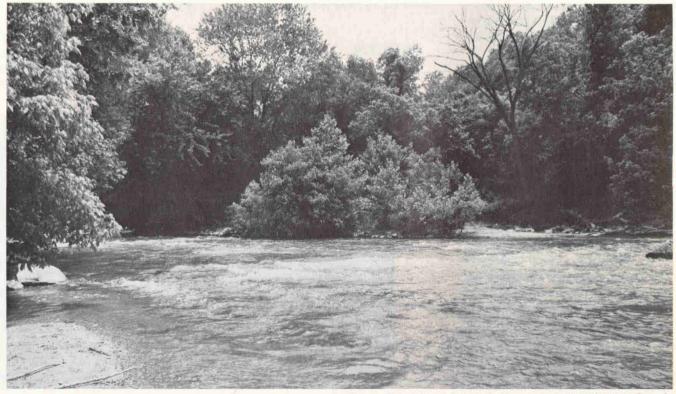
sites including eight properties listed in the National Register of Historic Places have been identified along the creek's corridor. The creek flows through Antietam National Battlefield and crosses the C & O Canal National Historic Park.

ISSUES

• Bacterial pollution and large suspended solids loads contribute substantially to restrictions on aquatic life, especially below Hagerstown.

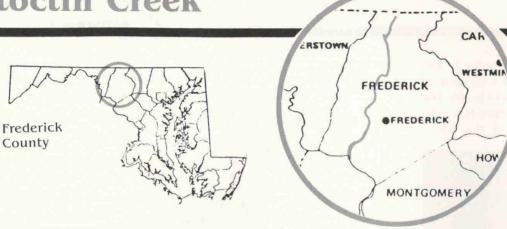
• Potential non-point sources of pollution are failing septic systems, agricultural, and urban runoff.

 Maintaining access for boating and fishing activities has been reported to be important for this stream.



Antietam Creek near Harper's Ferry Road, Washington County.

Catoctin Creek



RIVER DESCRIPTION

From the headwaters down to the western edge of Frederick

County, Catoctin Creek drains the farmland of the Middletown Valley. Located in the blue ridge section of the Appalachian Province, the stream valley has been designated a conservation area by Frederick County and is restricted from development.



Catoctin Creek at Rte 464, Ausherman Road, Frederick County.

The surrounding countryside is mainly pastoral with eroded hill-sides in the lower segment where the creek cuts through the rugged valley. The stream is shallow and used for canoeing during high water months.

RIVER RESOURCES

Eight historic sites have been identified along the Catoctin Creek corridor including four properties listed in the National Register of Historic Places.

ISSUES

 Overall water quality is generally good but waters are degraded by high sediment loadings during rainfall events.

• Potential non-point sources of pollution are agricultural runoff and failing septic systems.

• The Catoctin Creek lacks public access points for recreation uses, although it is considered to be a scenic resource.

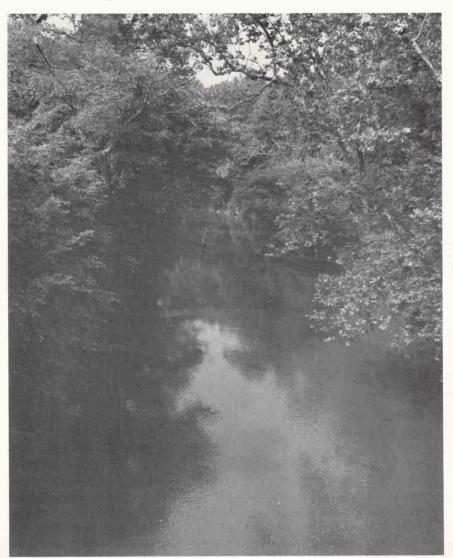
• The stream valley has been designated a conservation area by the county, and development in the flood plain is restricted.

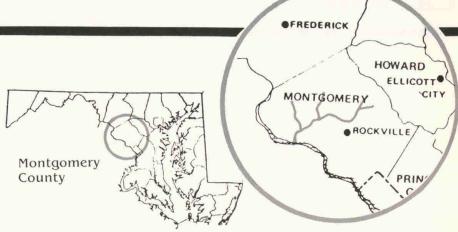
Seneca Creek

RIVER DESCRIPTION

Located in the Piedmont Province, Seneca Creek drains the heart of Montgomery County.

The only large wetlands in the county are located just west of the mouth of Seneca, in the McKee-Beshers Wildlife Management Area. Much of the flood





plain is marshy and the dominant trees are red maple, elm and ash. Fields and woods with a few rock outcrops can be viewed from the creek which affords a chance to paddle a small stream close to Washington, D.C. Motorboats and summer dwellings fill the last half mile below River Road which is a backwater of the Potomac River.

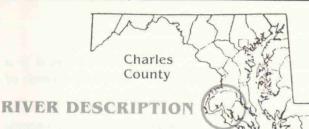
RIVER RESOURCES

Hoyles Mill Woods, a 200-acre of serpentine soils supporting an uncommon plant community within the Seneca Creek corridor, has been identified as a potential National Natural Landmark. Seneca Creek crosses the C & O Canal National Historic Park and flows through Seneca Creek State Park (almost 90 percent of Great Seneca Creek is in

Seneca Creek at Rte 112 Crossing, River Road, Montgomery County. public ownership). Little Seneca Creek above Maryland Route 28 has been designated a trout management area by the Maryland Wildlife Administration. Forty-nine historic sites have been identified along the creek's corridor including three properties listed in the National Register of Historic Places.

- Potential non-point sources of pollution are agricultural runoff, urban runoff, and failing septic systems.
- Several proposed lake sites are under consideration for control of flooding, sedimentation and erosion, and for recreational development.
- Seneca Creek is extensively buffered through Montgomery County's stream valley protection program.

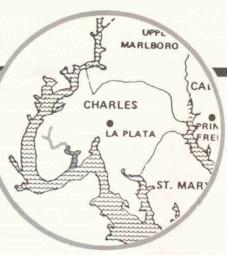
Nanjemoy Creek



Nanjemoy Creek, located in the Coastal Plain Province, is a tributary of the Potomac River. Nanjemoy Creek, along with its tributaries, forms an area virtually untouched by development. Extensive tidal marshes on this shallow creek support abundant wildlife, mainly waterfowl. Oak, beech, tulip poplar, sweet gum, scrub pine and birch form adjacent upland forests. Some logging is done by private mills and agricultural lands, where they occur, are adjacent to the marshes.

RIVER RESOURCES

Nanjemoy Creek-Wards Run is recognized by experts as an excellent example of an unspoiled freshwater tidal marsh ecosystem and has been identified as a potential National Natural Landmark. Twenty-seven archaeological sites have been identified by the Maryland Historic Trust along the creek's corridor. On one site within the Nanjemoy's corridor are some of the oldest dated shell midden deposits in the region.



Downriver view of Nanjemov Creek

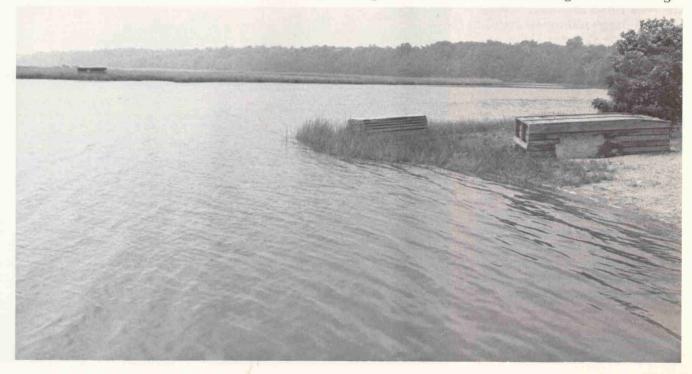
From Friendship Landing Road Park,

Charles County.

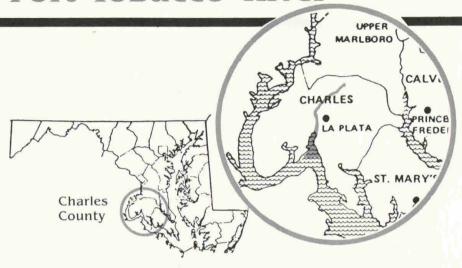
ISSUES

• Water quality standards are generally good but bacteria levels tend to be high in the mainstem and Mill Run, a tributary of Burgess Creek.

- A potential non-point source of pollution is agricultural runoff.
- The Nanjemoy was nominated as an area of critical State concern but was deleted because of citizens' concerns over state regulation and acquisition.
- There are no active conservation programs or provisions for the conservation of stream valleys in the county.



Port Tobacco River



RIVER DESCRIPTION

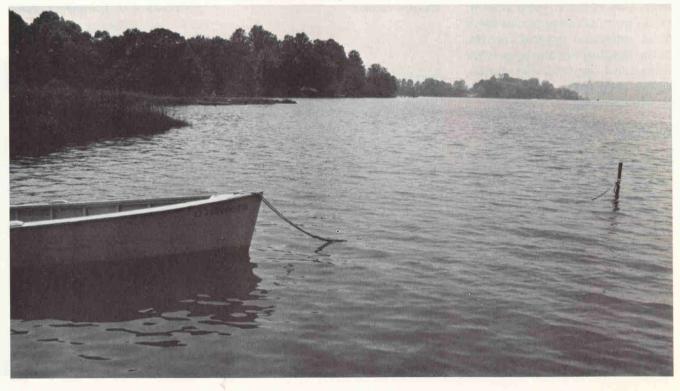
Located on the western shore, the river flows in a deep stream valley through rolling uplands of the Atlantic Coastal plain province before entering the Lower Potomac River. Since most of the area's water course is forested, the vegetative cover intercepts and filters runoff to provide excellent water quality protection. Marshlands provide habitats for an abundant variety of wildlife including large occurrences of migratory waterfowl. Port Tobacco is one of the oldest living communities on the East Coast and dates from historic times. It is experiencing a period of rebirth through the effects of an active restoration program.

Downstream view of the Port Tobacco River from two miles south of the colonial town of Port Tobacco.

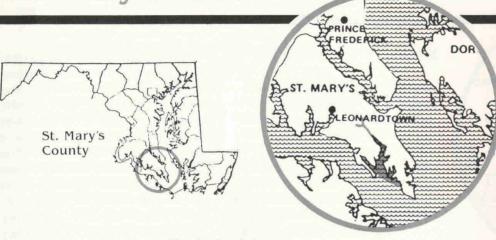
RIVER RESOURCES

Bald eagle nest territories have been reported along the river corridor. This species of eagle is classified as endangered by the U.S. Fish and Wildlife Service. Habre-de-Venture in Port Tobacco is a National Historic Register Site. Thirty-one archeological sites have been reported by the Maryland Historic Trust. In addition, the Trust has also reported that the town of Port Tobacco is considered to be a highly significant archaeological site.

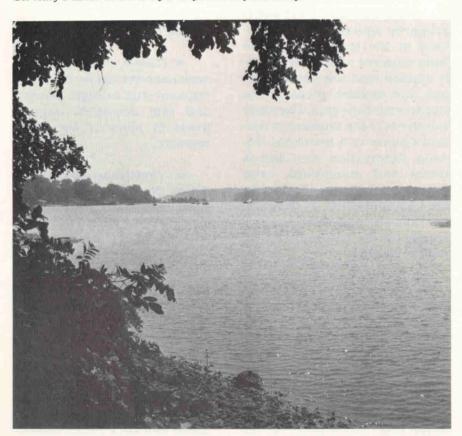
- Agricultural runoff is a potential non-point source of pollution.
- Development is presently scattered along the river corridor but increased development pressure is expected.
- There are no active conservation programs or provisions for the conservation of stream valleys in the county.



St. Mary's River



St. Mary's River at St. Mary's City, St. Mary's County.



RIVER DESCRIPTION

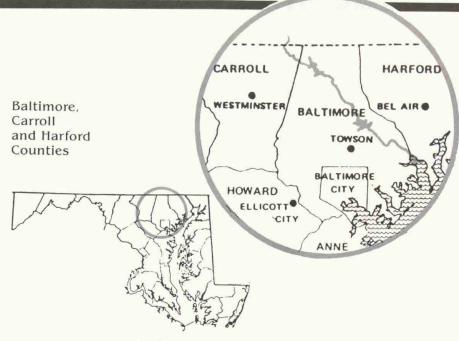
The St. Mary's is a fairly small partially tidal river which flows through the Embayed Section of the Coastal Plain Province. Agriculture and undeveloped forest with scattered residential buildings occupy most of the river corridor. At the head of the river there is a cluster of historic mercantile and milling sites. Spectacular vistas of 18th C. and 19th C. farms and plantations enrich the navigable river. The river flows in close proximity to the communities of Great Mills and St. Mary's City.

RIVER RESOURCES

Bald eagle nesting territories have been reported along the corridor of the St. Mary's. This species of bald eagle is classified as endangered by the U.S. Fish and Wildlife Service. St. Mary's City Historic District has been designated a National Historic Landmark and is the third permanent English settlement in America. In addition, twentythree historic sites, more than any other study river, have been identified. These sites include six properties listed in the National Register of Historic Places. One hundred and twenty-two archaeological sites, reported to be unique and exceptional, have been reported by the Maryland Historic Trust.

- Upstream of Pagon Point-Church Point is closed to shellfish harvesting due to excessive bacterial levels.
- Agricultural runoff is a potential non-point source of pollution.
- An impoundment is proposed for the Eastern Branch near Great Mills. An existing impoundment exists on the Western Branch which was designed as a fishing lake with some flood control benefits. The second impoundment would serve as a recreational lake with flood control benefits.

Gunpowder Falls



Lower Big Gunpowder Falls near Rte 40 Crossing in Gunpowder Falls State Park.



RIVER DESCRIPTION

With its headwaters beginning in southern Pennsylvania, Gun powder Falls takes a southeastern course through upper Baltimore County and over the fall line to the tidal segment east of Baltimore. It lies within two physiographic provinces; the Piedmont Plateau, characterized by rolling hills, and the Coastal Plain, an area of low elevations with flat landforms. Land use is primarily agricultural or woodland in the lower Gunpowder Falls segment with fairly equally divided land use between urban and forested areas in the Gunpowder Falls area. The lower two-thirds of the segment in Harford County is a restricted U.S. Army Reservation area and is forest and marshland. Loch Raven and Pretty Boy Reservoirs are impoundments on Gunpowder Falls which are used as water supply for the Baltimore Metropolitan Region.

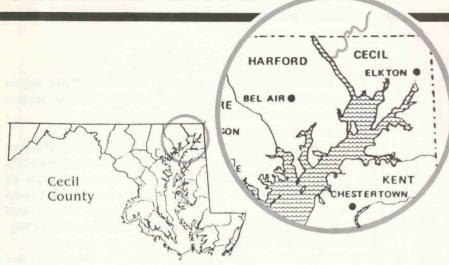
RIVER RESOURCES

Longgreen Creek and Sweathouse Branch have been identified as a National Natural Landmark. Canoe experts have identified the segment of the Gunpowder Falls from Lower Loch Raven Dam to U.S. Route 40 for

its whitewater and exciting descent over the fall line. Approximately sixty percent of the river's corridor is in public ownership with much of the river flowing through the 11,975-acre Gunpowder Falls State Park. The Maryland Wildlife Administration has designated two trout streams and the Maryland Tidewater Administration has designated most of the river as a key tidal sport fishing area.

- Class I water standards have not been met for the entire segment due to high bacteria and low dissolved oxygen levels in parts of the lower segment.
- Prettyboy and Loch Raven Reservoirs experience algal blooms due to high nutrient input from tributaries.
- Potential non-point sources of pollution are runoff from construction sites sand and gravel operations, agricultural runoff, failing septic tanks, and urban runoff.
- Small mouth bass fishing below Loch Raven may be adversely impacted by insufficient water flow from Prettyboy and Lock Raven Dams.

Octoraro Creek



RIVER RESOURCES

The Octoraro Creek flows through the 2,325-acre Susquehanna State Park. Twenty-five historic sites have been identified including one property listed in the National Register of Historic Places. The Maryland Historic Trust reported that the Conowingo archaeological site, within the Octoraro Creek corridor, appears to have been a major habitation location from 3,000 B.C.-1,6000 A.D.

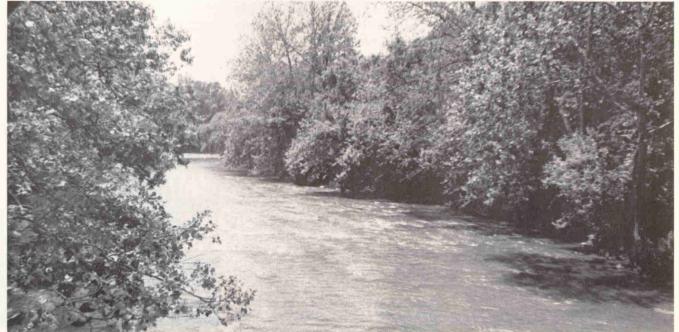
ISSUES

- Water quality standards are being met with exception of occasional pH and bacterial violations.
- Potential non-point sources of pollution are agricultural runoff and failing septic tank systems.
- Erosion has destroyed much of the archaeological potential in the broad floodplains. Large habitation sites are likely to occur in the region and may be preserved in a few locations.

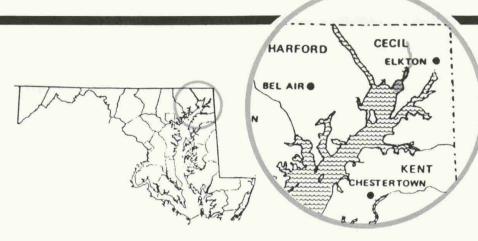
RIVER DESCRIPTION

Octoraro Creek runs through the Coastal Plain Province from its confluence of the East and West Branches in Pennsylvania to the Susquehanna River below Conowingo Dam. From the covered bridge just below the Chester and from Octoraro Lake reservoir to Horseshoe Bend the water is flat with easy riffles. Fields and farmlands occupy the banks of the northern portions of the creek. Below Route 1 the stream rushes through a gorge with numerous rapids formed by rock gardens, gravel, and small ledges. Except for some powerlines and summer homes the scenery is generally rural.

Downstream view of Octoraro Creek from Old Porter's Bridge Road near Richardsmere, Cecil County.



Northeast River



RIVER DESCRIPTION

Located in the Piedmont Province. Northeast River is the tidal river northeast of the Susquehanna flats area and its flow and circulation are greatly influenced by the Susquehanna River. Some of the highest land on the Chesapeake Bay is on Elk Neck between Northeast and Elk Rivers. At the entrance to the river on the west is Carpenter's Point where Nathaniel Ramsay lived; he was one of the outstanding figures of the Battle of Monmouth. A little more than half way up the river on the western bank is the town of Charlestown which was enacted by law to be created in 1972.

RIVER RESOURCES

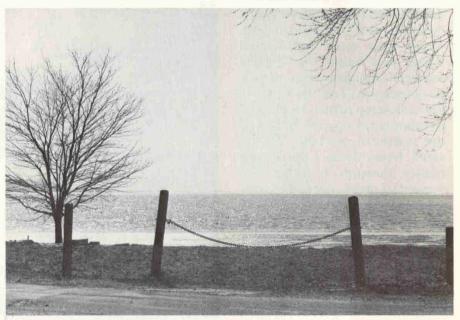
Gilpin's Falls on Northeast Creek has been identified as a potential National Natural Landmark. It is considered nationally significant for its unique geologic formations (i.e. undeformed pillows and broken pillow brecias in subaqueous lavas). The mouth of the river has been designated as a key tidal sport fishing area by the Maryland Tidewater Administration.

View of the Northeast River from Calvert Street, Charlestown, Cecil County.

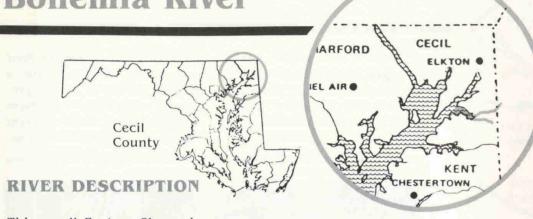
ISSUES

- Overall water quality remains good, except for problems with high bacterial counts.
- Potential non-point souces of pollution are agricultural runoff and failing septic systems.
- Erosion has destroyed much of the archaeological potential in the broad floodplains. Large habitation is likely to have occurred in the region and these sites may be preserved.

- The Gilpin Falls hydro project is currently under construction.
- A study and preparations for dredging has been recently completed with the Corps of Engineers. Easements for spoil sites have been acquired and the project is awaiting funding.
- Cecil County does not have a stream valley protection program. However, there are provisions for waterfront districts which have the potential to limit development in these areas.



Bohemia River



provided by the Bohemia. The mouth of the river has been designated as a key tidal sport fishing area by the Maryland Tidewater Administration.

This small Eastern Shore river flows from the east into the Elk River. Located below the Chesapeake and Delaware Canal, seagoing ships are continually passing its mouth. The hills at this northern portion of the Chesapeake Bay are in contrast to the

flat lands and their effect on the landscape is dramatic. Adjacent land use is primarily agricultural with homes scattered along the shoreline.

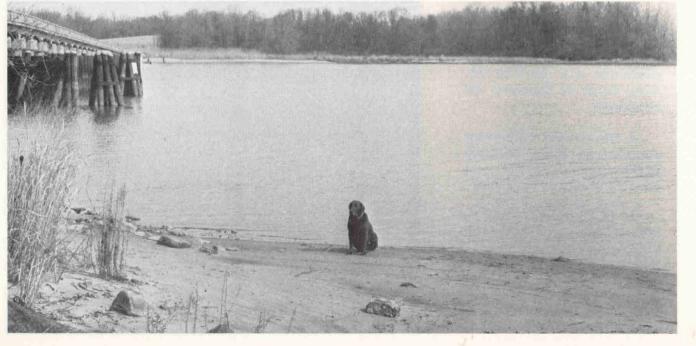
View of the Bohemia River near Rte. 213 bridge, Cecil County.

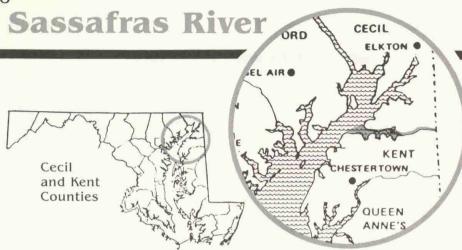
RIVER RESOURCES

The Bohemia River was reported to be a major wintering area for Canada geese. Spawning areas for nearly all anadromous and semi-anadromous species are

ISSUES

- Water quality is generally good with the exception of a limited number of violations of pH and bacteria standards.
- Potential non-point sources of pollution are failing septic systems, pleasure craft, and agricultural runoff.
- Agricultural activity has disturbed many of the archaeological sites.
- The Bohemia River is near the approach to the C&D Canal, and large ships contribute to wave action that causes erosion and shoaling at the mouth of the river.
- It has been reported that dredging may be necessary.





RIVER DESCRIPTION

The steep wooded banks of the Sassafras River rise eighty feet above the water level. One of the northern Coastal Plain Province rivers in Maryland that has many inlets winding away to disappear in the shadow of its lofty banks. Rich farmland and fine old houses occupy the shore but most are too high and too well screened to be seen from the river. The Sassafras River has a shallow drainage system that has many relatively short tributaries.

RIVER RESOURCES

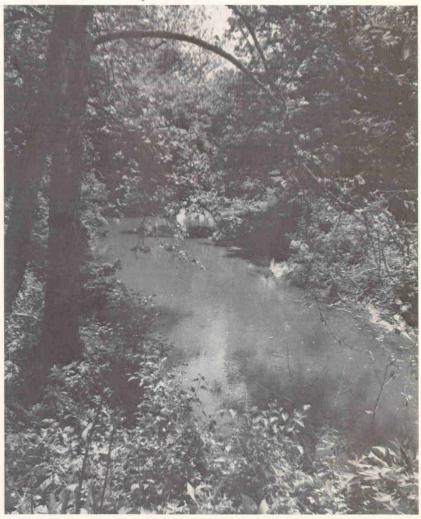
Bald eagle nest territories have been reported along the Sassafras River Corridor. This species of eagle is classified as endangered by the U.S. Fish and Wildlife Service. The Sassafras is a major wintering area for Canada geese and black ducks.

ISSUES

- Water quality is generally good but there are problems with high bacteria levels.
- All Class II waters in the segment are closed to shellfish harvesting, and Grove Neck spawning sites have been eliminated as a result of U.S. Army Corps of Engineers fill operations.
- Striped bass and herring populations have declined while channel catfish and American eel have increased.
- The Sassafras has the highest delivery of sediment into an estuary of any river in Maryland. Kent and Cecil Counties Soil Conservation Districts have identified the Sassafras Watershed as a critical area for erosion control.

• Increased boating use in the river has created problems of congestion and pollution particularly around Georgetown and Fredericktown. As a result, the Maryland Department of Natural Resources, Kent and Cecil Counties, and a citizens group are in the process of studying the problem and developing a management plan to deal with boating use.

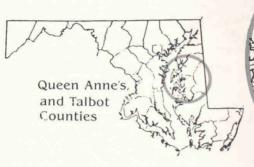
Upriver view of the Sassafras River at the Route 290 crossing near the town of Sassafras, Kent County.



Wye River and Wye River East

RIVER DESCRIPTION

This narrow, winding, and south flowing river is one of the two main tributaries of the Eastern Bay System. Wye River is divided from Eastern Bay by a long narrow neck ending at Bennett's Point. As part of the Coastal Plain Province, the land along the river is generally flat with



tidal marshes and small lowland wooded stands. Wye Island, accessible by a small bridge which crosses Wye Narrows, is bordered on the west by the river. Large

homes which were part of 18th & 19th century estates surrounded by agricultural lands can be viewed from the river.

CAROLINE

DENTON

Wye East along with Wye River and Miles River constitutes the Eastern Bay System which is part of the Coastal Plain Province. The river forms the southern boundary of Wye Island and part of the boundary between Queen Annes and Talbot Counties. Abrupt changes in topography occur in the upper reaches which were carved out by the advancing and retreating ocean during the Pleistocene Age. Old Wye Mill is one of the oldest grist mill operations in the United States and has been at work for over 310 years. It is the oldest commercial enterprise still operating in either Talbot or Queen Annes County. Estates surrounded by lawns and agricultural lands are visible along the corridor and are reminiscent of an earlier period in Maryland's history.

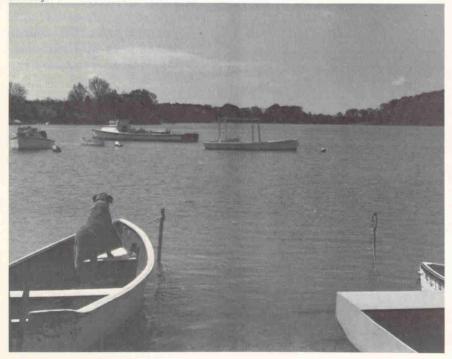
RIVER RESOURCES

Bald eagle nest territories and suitable locations for Delmarva fox squirrel habitats have been identified along the Wye and Wye River East corridors. Both of these species have been classified as endangered by the U.S. Fish and Wildlife Service. The river corridors have been reported to be an important wintering area for Canada geese, canvasbacks, and mallards.

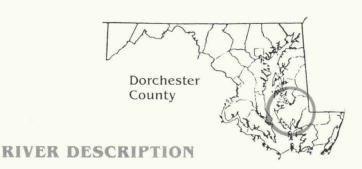
ISSUES

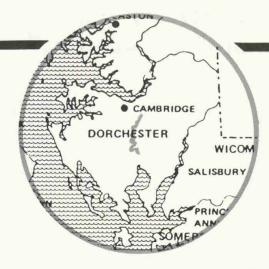
- Water quality is generally good, but the upper portion of the Wye River and the Wye East River continue to be closed to shellfish harvesting
- Potential non-point sources of pollution are failing septic systems, waterfowl, and agricultural and surface runoff.

Wye River East at Wye Landing, Talbot County, looking at Wye Island, Queen Anne's County.



Transquaking River





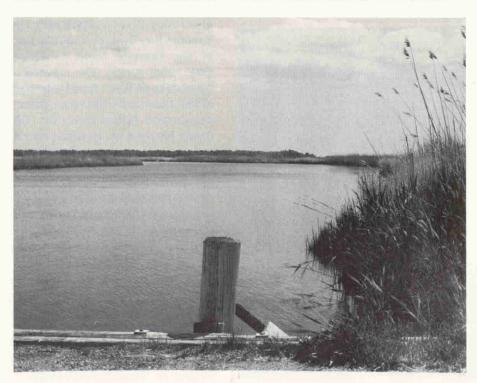
The Transquaking River meanders in a southeast direction through the Eastern Shore of the Coastal Plain Province. The extent of swamps, natural ponds, marshes and bogs provide habitats for a diversity of vegetation and wildlife. Route 50 separates agricultural lands which are used for chicken farms from the wetlands to the south. Less than 1% of the land is developed and wetlands occupy much of

the remaining corridor, giving a

RIVER RESOURCES

very rural quality.

Bald eagle nest territories have been reported along the Transquaking River corridor. This species of eagle is classified as endangered by the U.S. Fish and Wildlife Service. It has been reported that the Transquaking is used as a wintering area by several thousand Canada geese. Coastal plain river type wetlands occur with broad expanses of tidal marsh in the lower reaches of the Transquaking. This wetland has been ranked as highly significant by the Maryland Water Resources Administration.



ISSUES

- Potential non-point sources of pollution are agricultural runoff, failing septic tanks, and wildlife concentrations.
- Conservation of this undeveloped river could insure the preservation of as yet unlocated archaeological sites that have high potential for cultural resouces.
- Thirty-two percent of Dorchester County's land is classified as wetlands and is recognized by federal and state preservation laws; the county has mixed feelings about additional state conservation efforts.

Transquaking River at Bestpitch, Fishing Bay, W.M.A., Dorchester County.

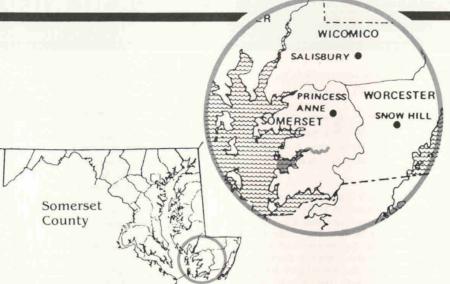
Big Annemessex River

RIVER DESCRIPTION

Part of Maryland's southern most drainage basin on the Eastern Shore, the Big Annemessex River meanders southwest through the low relief land of the Coastal Plain Province. Vegetation along the corridor is diversified due, in part, to the extent and diversity of swamps, ponds, and marshes. Several botanical species approach their northern limit in this part of Maryland. Land use is predominantly devoted to agriculture.

RIVER RESOURCES

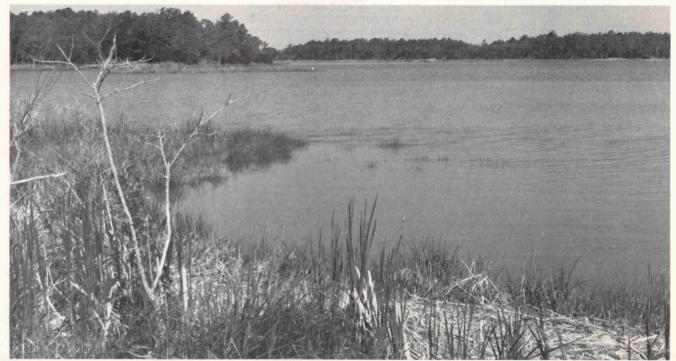
Black duck, bufflehead, canvasback, goldeneye, Canada goose, mallard, scoter, oldsquaw and whistling swan are common wintering waterfowl along the Big Annemessex River corridor. Twelve shellfish areas have been identified which includes over 4,400 acres. Coastal plain river type wetlands occur with broad expanses of tidal marsh in the lower reaches of the Big Annemessex. This wetland type has been ranked as highly significant by the Maryland Water Resources Administration.



ISSUES

- Water quality standards are being met except for occasional violations of the bacterial standard.
- Shore erosion is evident in the area.
- Low lying areas along the Big Annemessex have been zoned conservation. There is very little activity in the way of new development.

Big Annemessex River at River Road Crossing West of Kingston, Dorchester County.



SCENIC AND WILD RIVERS ACT As Amended In the 1978 Session Of the General Assembly Article—Natural Resources Section 8-401 Through 8-407 (Portions deleted) Annotated Code of Maryland

(1983 Replacement Volume and 1983 Supplement)*

EXCERPTS FROM THE MARYLAND SCENIC AND WILD RIVERS ACT

Section 1. Be it enacted by the General Assembly of Maryland, That the Laws of Maryland read as follows:

Article-Natural Resources

8-401.

Many of the rivers of Maryland or portions of them and their related adjacent land areas possess outstanding scenic, geologic, ecologic, historic, recreational, agricultural, fish, wildlife, cultural and other similar values. The policy of the State is to preserve and protect the natural values of these rivers, enhance their water quality and fulfill vital conservation purposes by wise use of resources within their surrounding environment . . .

8-402.

- (b) The Secretary shall administer the provisions of this subtitle. The Secretary shall formulate and implement a program to carry out the policy under 8-401 of this subtitle.
- (d) (1) In this subtitle the following words have the meanings indicated.
 - (2) "Scenic River" means a free-flowing river whose shoreline and related land are predominantly agricultural, forested, grassland, marshland, or swampland with a minimum of development for at least 2 miles of the river length.
 - (3) "Wild River" means a freeflowing river whose shoreline and related land are:
 - (I) Undeveloped;

- (II) Inaccessible except by trail; or
- (III) Predominantly primitive in a natural state for at least 4 miles of the river length.
- (F) By July 1, 1990, the Secretary shall inventory and study every other river and shoreline and related land in the State and identify the rivers and their related shorelines or portions of them that are eligible for inclusion into the Scenic and Wild Rivers Program as either a scenic or wild river. Upon completion of each inventory and study, the Secretary shall submit it, with any recommendations for additions to the scenic and wild rivers system, to the governing body of every county where the river is located, for their approval and recommendations, and to the next regular session of the General Assembly.

8-403.

- (a) (1) There is a Scenic and Wild Rivers Review Board. The Board consists of the secretaries of Natural Resources, State Planning, Agriculture, and Health and Mental Hygiene . . .
- (b) The Scenic and Wild Rivers Review Board shall:
 - (1) Review:
 - (I) Any inventory, study, plan, rule, and regulation that is prepared

- under this subtitle;
- (II) The recommendations on the inventory, study, plan, rule, and regulation of the Secretary, any local governing body, or any local advisory board.
- (2) Recommend to the General Assembly
 - (I) Plans for the management of resources of the rivers, shorelines, and related lands that are included in the Scenic and Wild Rivers Program; and
 - (II) Studies for including additional rivers and tributaries in the Scenic and Wild Rivers Program:
- (5) Appoint, with the advice and consent of the appropriate local governing body, a local Scenic and Wild River Advisory Board for each river that is included in the Scenic and Wild Rivers Program.

8-404.

The Scenic and Wild Rivers Review Board may recommend for inclusion in the Scenic and Wild Rivers Program rivers, streams, and portions of rivers, streams, and tributaries, and the related adjacent lands which fall within the following descriptions:

 Trout streams and wetland areas;

- (2) Spawning and propagation areas;
- (3) Streams and rivers with scenic and aesthetic value of statewide significance;
- (4) Existing or proposed public land adjacent to the rivers and streams;
- (5) Sections of any river or stream where no development exists on either side of the river or stream for a distance of one-quarter mile from the mean high water line of the river or stream;
- (6) Sections of any river or stream where limited development exists but is compatible with the wise use of the resources;
- (7) Sections of any river or stream where encroachment is imminent and would lead to degradation of the river or stream, to some form of pollution, or adversely affect the intent of this subtitle; or
- (8) Sections of any river or stream that are important as food production areas, areas supporting migratory waterfowl, and spawning areas for shellfish.

8-407.

Every State unit shall recognize the intent of the Scenic and Wild Rivers Program and take whatever action is necessary to protect and enhance the scenic and wild qualities of the designated river . . .

SUMMARY OF OPTIONS AND RECOMMENDATIONS FOR RIVER CONSERVATION

Option 1.	USE THE MARYLAND SCENIC AND WILD RIVERS ACT TO ASSIST THE CHESAPEAKE BAY CLEAN-UP EFFORTS—(ALL RIVERS)	Option 4.	CONSIDER NEW RIVER CONSERVATION ALTERNATIVES TO ACCOMPLISH STATE WILD AND SCENIC RIVER GOALS—(ALL RIVERS)
Option 2.	MODIFY THE MARYLAND SCENIC AND WILD RIVERS ACT—(ALL RIVERS)	A. B. C.	Local river conservation planning grants More effective use of existing programs State and local government coordination
A.	Expand the focus of the Scenic and Wild Rivers Act to include urban and recreational rivers Create a provision within the Scenic and Wild	D.	Federal coordination using the National Wild and Scenic Rivers Act Federal consistency on coastal rivers
В.	Rivers Program for technical assistance to local governments Establish a statewide consistency provision for Maryland Scenic Rivers	E. Option	CONDUCT PUBLIC INFORMATION MEETINGS TO IDENTIFY OPTIONS—(CHESTER, CHOPTANK,
Option 3.	EXPAND AND CLARIFY THE ACTIVITIES OF THE WILD AND SCENIC RIVER PROGRAM—(ALL RIVERS)	5. A. B.	BLACKWATER, AND NANTICOKE RIVERS) State scenic river designation L&WCF planning grant
A.	Develop program guidelines and regulations Study rivers prior to designation	C.	MD-DNR/NPS technical assistance
B. C. D.	Expand the State scenic rivers inventory Promote Maryland rivers conservation	Option 6.	SOLICIT TECHNICAL ASSISTANCE PROPOSALS FROM LOCAL OFFICIALS—(MARSHYHOPE CREEK AND CHICAMACOMICO RIVER)
E.	Conduct river conservation workshops	Option 7.	DESIGNATE THE PATAPSCO AND GUNPOWDER RIVER FOR STUDY—(PATAPSCO RIVER AND GUNPOWDER RIVER)

STUDY PARTICIPANTS

Many organizations and individuals provided information on Maryland rivers and were consulted during the study. These and other organizations and individuals with an interest in Maryland Rivers are listed in this section. The group include federal, State and county agencies and private organizations such as sportsmen's and conservation groups.

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For thou art with me here upon the banks Of this fair river; . . .

Knowing that Nature never did betray
The heart that loved her; 'tis her privilege,
Through all the years of this our life, to lead
From joy to joy; for she can so inform
The mind that is within us, so impress
With quietness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life,
Shall e'er prevail against us, or disturb
Our cheerful faith that all which we behold
Is full of blessings. ??

—William Wordsworth (1770-1850) Lines composed on revisiting the banks of the Wye River, England, July 13, 1798.